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NO ASSOCIATES

NO. 852 P. 3

Solar Energy Systems
Pty Ltd
(ACN 084 656 691)

and

Bruno Wittwer

AGREEMENT

THIS AGREEMENT is made on the 22nd day of January 1999

BETWEEN

Solar Energy Systems Pty Ltd (ACN 084 656 691) of Unit 3, 81 Guthrie Street Osborne Park Western Australia, 6017 ("SES")

AND

Bruno Wittwer of 9 Newborough Street, Scarborough, Western Australia, 6019 ("Wittwer")

WHEREAS

- A. Wittwer is the sole owner of a business that operates in the water pumping and solar energy sectors and trading under the registered business name of BW Solar .
- B. Wittwer has specific knowledge and skills useful for the development of products related to solar energy, water pumping and other areas.
- C. SES has been recently incorporated with the view to developing a business which can utilise the products developed by Wittwer and wishes to purchase the BW Solar Business and form an association with Wittwer to develop such business and products.
- D. The parties wish to record the formal terms and conditions of such acquisition and association.

THE PARTIES AGREE as follows:

1. INTERPRETATION

In this Agreement, unless the context otherwise requires:

- 1.1 The following words or phrases have the meanings assigned to them as follows:

Agreement means this agreement as amended, supplemented or varied from time to time;

Associate means

- (i) with respect to an entity any entity in which any party or any Related Body Corporate has a substantial shareholding (as defined in the Corporations Law, of Australia); and
- (ii) with respect to a natural person any entity controlled by that person or any trust or superannuation fund established for the benefit of the person;

Business Name means the registered business name B/W Solar (WA 0087139J)

BW Solar Business means the solar energy and water pumping business developed by Wittwer and trading as BW Solar including, but not limited to, all patents and other intellectual property, stock, plant, goodwill and licences but does not include the Business Name;

BW Solar Royalty means a royalty payable at the rate of twenty five percent (25%) on all Licensing Revenues in respect of the BW Solar Royalty Items except the items the subject of the Conlog Royalty;

BW Solar Royalty Items means the products developed as part of the BW Solar Business and listed in Schedule 1 or any other items developed by Wittwer prior to Effective Date and formally agreed to by the Company;

Cash Component means one hundred thousand dollars (\$100,000);

Company means Solar Energy Systems Pty Ltd (ACN 084 656 691) and to the extent that the contexts permits it includes any Related Corporation;

Conlog Royalty means a royalty payable at the rate of twenty five percent (25%) on all Licensing Revenues in respect of the BW Solar Royalty Items derived from Conlog Ltd or any Associate or any other member of the Log-Tek Group of South Africa and a royalty payable at the rate of twenty percent (20%) on all Licensing Revenues in respect of the SES Royalty Items derived from Conlog Ltd or any Associate or any other member of the Log-Tek Group of South Africa;

Consideration means the Cash Component plus the Share Component;

Contract Period means the period of 5 years from the Execution Date;

Effective Date means 8 January 1999;

Encumbrance includes any mortgage, pledge, charge, lien, assignment, hypothecation, security interest, title retention, preferential right or trust arrangement and any other security agreement or arrangement of any kind given by way of security;

Execution Date means the date that this agreement is executed;

Information means Wittwer's special knowledge and skills with regard to the development, marketing and installation of products in the solar energy and water pumping fields;

Licensing Revenues means:

- (i) in respect of the Company - all revenues received by the Company from licensing and royalty agreements for the manufacture and sale of products acquired or developed by the Company less all costs (whether direct or indirect) incurred by the Company in establishing or maintaining the relevant licensing agreement and royalty, which costs in any event shall not exceed 10% of such revenues (eg. If the revenues are \$100, the costs shall not exceed \$10); and
- (ii) in respect of an assignee, other than a Related Corporation (which shall have the same meaning as in (i)) - all revenues received by the assignee from the manufacture and sale of products produced using the intellectual property acquired by the assignee from the Company less all costs (whether direct or indirect) incurred by the assignee in maintaining the intellectual property rights or further developing the product, which costs in any event shall not exceed 10% of such revenues;

Notification of Product Development means a notice given by Wittwer to the Company containing the name and detailed description of a product that he wishes to be added as a SES Royalty Item (or BW Solar Royalty Item) pursuant to clause 5, in the general form contained in Schedule 2.

Related Corporation has the meaning given to "Related Body Corporate" in the Corporations Law;

Relevant Net Profits means the net profits derived by the company;

Service Options means options where each option gives the holder the right to acquire one fully paid share in the Company by a date and upon terms as are to be agreed;

SES Royalty means a royalty payable at the rate of twenty percent (20%) on all Licensing Revenues in respect of the SES Royalty Items except those the subject of the Conlog Royalty;

SES Royalty Items means the products developed by Wittwer while an employee or consultant to the Company pursuant to this Agreement and acknowledged as such by the Company pursuant to clause 5.3;

Settlement Date means the date 7 days after the latter of the Effective Date and the Execution Date;

Share Component means two million (2,000,000) ordinary fully paid shares in the Company issued at a nominal consideration of one (1) cent per share;

Wittwer Interests means each of the BW Solar Royalty, SES Royalty, the Conlog Royalty and the Wittwer NPI; and Wittwer Interest means one or more of the Wittwer Interests which is being disposed or assigned pursuant to clause 8;

Wittwer NPI means seven and one half percent (7.5%) of the Relevant Net Profits.

- 1.2
- (a) part and clause headings do not affect the interpretation of this agreement and a reference to parts, clauses and paragraphs is a reference to parts, clauses and paragraphs in this agreement;
 - (b) a reference to an Act of a Parliament includes regulations, rules, by-laws and orders made under that Act, and a reference to an Act of a Parliament includes a reference to an amendment, re-enactment, variation or extension of it;
 - (c) a reference to a document includes a reference to that document as amended, varied, supplemented or replaced from time to time;
 - (d) words indicating the singular include the plural and vice versa, expressions indicating natural persons include a company, corporation or other body corporate, partnership, joint venture, association and a governmental agency;
 - (e) a reference to a party includes that party's executors, administrators, successors, substitutes and assigns, including a person taking by way of novation;
 - (f) the word person includes a firm, body corporate, an unincorporated association or a governmental agency;
 - (g) reference to a monetary amount is a reference to Australian dollars; and
 - (h) where the day on or by which a matter or thing is to be done is not a Business Day, that matter or thing must be done on or by the next Business Day.

2.0 PURCHASE OF BW SOLAR BUSINESS AND INTELLECTUAL PROPERTY

- 2.1 The Company agrees to purchase and Wittwer agrees to sell the BW Solar Business as and from

the Effective Date.

- 2.2 Wittwer agrees to the covenants and restraints contained in this Agreement and acknowledges them to be reasonable.
- 2.3 The consideration payable by the Company for the purchase of the BW Solar Business and the restraints and covenants contained in this Agreement shall be the Consideration together with the Wittwer Interests.
- 2.4 The Share Component of the Consideration shall be issued by the Company on the Settlement Date.
- 2.5 Wittwer agrees to be bound by the Company's Constitution and by this agreement declines to participate in any shares offered by the Company for a period of 6 months from the Execution Date other than a right to participate in subscription of up to 200,000 shares at an issue price of five cents. Wittwer acknowledges that he, or the assignee or purchaser of his shares, may be required to escrow some or all of the shares issued to him upon the Company applying for listing on the Australian Stock Exchange Limited or any other recognised stock exchange. Wittwer agrees to enter into any necessary agreements or sign any documents required under the listing rules of such stock exchange in order for the Company to obtain any such listing. In addition to any rules relating to the transfer of shares contained in the Constitution and Articles of the Company, Wittwer further agrees not to sell or assign his shares until such time as the purchaser or assignee provides a similar undertaking to the Company. Wittwer hereby acknowledges that the directors of the Company shall not be obliged to register any such transfer until such undertaking is provided.
- 2.6 The Cash Component of the consideration shall be payable with the first \$25,000 being payable on the Settlement Date, a further \$25,000 being payable at the same time on the condition that, in the directors of the company's sole opinion this does not adversely affect the financial situation of the company, and if this is the case, within three months of the Settlement Date. The remaining balance of \$50,000 shall be payable by 30 June 1999, subject to clauses 2.7 and 9.
- 2.7 The Company shall (within 7 days of a capital raising) advise Wittwer when the funds received from capital raisings exceed \$500,000 in which case Wittwer shall, for a period of 30 days, be entitled to make a once off election to be paid such of the Cash Component of the Consideration that has not already been paid to him. If Wittwer makes such election the Company shall pay such sum to him within 7 days.
- 2.8 Wittwer hereby assigns to the Company with effect from the Effective Date all of Wittwer's right title and interest in the BW Solar Business free of any Encumbrance or third party interest.
- 3.0 ADJUSTMENTS AND CUT-OFFS
- 3.1 As close as possible to the Effective Date the Company and Wittwer shall conduct a stock take for the purpose of determining the level of stock owned by Wittwer and to be acquired by the Company from the Effective Date. The Company shall pay Wittwer, within 21 days of the Effective Date, for the stock (at cost or other agreed value), up to the value of \$30,000.
- 3.2 (a) All orders placed for BW Solar products not completed on the Effective Date will be

- transferred to the Company and any revenue derived therefrom, including any deposits shall become the property of the Company.
- (b) All revenue and cash received in respect of BW Solar products and stock items sold and shipped before the Effective Date shall be for the account of Wittwer.
 - (c) Stock relating to the future sales of the company purchased but not paid for by the Effective Date by Wittwer shall be paid for by the company. Wittwer shall be responsible for all other costs relating to goods or services purchased and received in connection with the BW Solar Business prior to the Effective Date
 - (d) The Company shall be responsible for all cost and expenses in respect of goods and services procured after the Effective Date. The Company shall also be responsible for the cost of all stock it receives and accepts after the date of the stocktake.

4.0 PRODUCT AND PRIOR LIABILITIES

- 4.1 Wittwer warrants that he is not aware of any defects with the products manufactured, installed or sold by the BW Solar Business and he is not aware of any current or pending claims, actions, law suits or the like in respect of the BW Solar Business.
- 4.2 Wittwer acknowledges that he shall remain solely responsible and liable for any claims in respect of products sold by the BW Solar Business prior to the Effective Date and agrees to indemnify the Company and keep the Company indemnified against all claims, damages, fines and costs relating to, or that arise out of, the operations of the BW Solar Business prior to the Effective Date.
- 4.3 SES acknowledges that it shall remain solely responsible and liable for any claims in respect of products sold by the SES after the Effective Date and agrees to indemnify Wittwer and keep Wittwer indemnified against all claims, damages, fines and costs relating to, or that arise out of, the operations of SES after the Effective Date.
- 4.4 SES shall be responsible and liable for any claims and warranties relating to the air liquid pump and in particular SES shall assume responsible for the potential agreed commissions payable to Ross Poultney of approximately \$50 per unit sold in Australia.

5.0 WITTWER INTERESTS

- 5.1 Wittwer shall be entitled to be paid the BW Solar Royalty where the Company enters into licensing and/or royalty agreements for the manufacture of products developed by Wittwer while operating the BW Solar Business.
- 5.2 Wittwer shall be entitled to be paid the SES Royalty where the Company enters into licensing and/or royalty agreements for the manufacture of products developed by Wittwer while an employee or consultant to the Company pursuant to this Agreement and acknowledged as such by the Company pursuant to clause 5.3.

5.3.1 Should Wittwer develop a product while an employee or consultant to the Company pursuant to this Agreement which he wishes to be subject to the SES Royalty he shall lodge a Notification of Product Development Notification

5.3.2 While Wittwer is an employee or consultant to the Company, the Company shall notify Wittwer

Company advise Brunc within 14 days of putting or prior to licensing
of any product not already a SES Royalty Item or BW Solar Royalty Item that the Company moves to protect through any intellectual property mechanism or otherwise intends to licence to a third party for manufacture. Such notification shall be given within 14 days of the lodgment of the intellectual property protection application with the relevant authority, or prior to entering into an agreement for such manufacture.

Brunc to lodge a NO PD within 30 days
5.3.3 Wittwer agrees that the Company will not be obliged to pay the SES Royalty in respect of any product developed by Wittwer where such Notification of Product Development is not lodged within 30 days of notice required by 5.3.2 being given to Wittwer or within 60 days of Wittwer ceasing to be an employee or consultant of the Company.

Company has 30 days to accept this
5.3.4 The Company shall have a period of 30 days in which to accept the product contained in the Notification of Product Development as having been developed by Wittwer or to reject it. The Company shall notify Wittwer of the Company's acceptance or otherwise of the product being a valid SES Royalty Item (or BW Solar Royalty Item), and if the Company fails to give such notification the product contained in a validly delivered Notification of Product Development shall be deemed to have been accepted as a valid SES Royalty Item (or BW Solar Royalty Item).

5.3.5 Should the Company and Wittwer dispute whether a particular product is an eligible SES Royalty Item or BW Solar Royalty Item, the parties shall use their best endeavours to resolve the dispute as quickly as possible and until such time as the dispute is resolved any Licensing Revenue shall be held in a trust account. Should the parties not resolve the dispute, or have it determined by recourse to legal proceedings, within 15 years the Licensing Revenue held on trust and all future royalties relating to the product shall revert to the Company, once it has paid all reasonable costs of Wittwer in trying to resolve the dispute.

5.4 At the end of the Contract Period Wittwer and the Company shall negotiate in good faith as to whether Wittwer shall continue to receive the SES Royalty, the Conlog Royalty and the BW Solar Royalty or in substitution the Wittwer NPI. If the parties do not reach agreement within 90 days of the end of the Contract Period the greater of the Wittwer NPI and the sum of the SES Royalty, the Conlog Royalty and the BW Solar Royalty shall be held in a trust account. Should the parties not resolve the dispute, or have it determined by recourse to legal proceedings, within 15 years the amount held on trust shall revert to the Company, once it has paid all reasonable costs of Wittwer in trying to resolve the dispute.

5.5 Wittwer shall be paid the Conlog Royalty.

5.6 If the Company seeks a listing on a recognised Stock Exchange and if required by the Company, Wittwer agrees (at Wittwer's election) to either:

- (i) retain the BW Solar Royalty, SES Royalty and Conlog Royalty and forfeit any future entitlement to the Wittwer NPI; or
- (i) convert (whichever is operative of) the BW Solar Royalty, SES Royalty and Conlog Royalty, or the Wittwer NPI to such number of shares in the Company as shall be agreed, and in default of agreement to 7.5% of the proposed issued capital for the Company immediately after listing.

5.7 The BW Solar Royalty, Conlog Royalty and SES Royalty shall be paid to Wittwer within 21 days of receipt by the Company. The Wittwer NPI (if operative) shall be paid to Wittwer within 60 days of the end of each financial year

6.0 CONFIDENTIALITY AND INTELLECTUAL PROPERTY OWNERSHIP

- 6.1 (a) As at the date of this Agreement and during the currency of this Agreement Wittwer shall make exclusively available to the Company all of the Information.
- (b) Wittwer covenants with the Company that both during the continuance and after the termination of this Agreement he shall keep entirely secret and confidential and shall not directly or indirectly use, divulge or communicate to any person any of the Information, intellectual property or other confidential information of or in relation to the BW Solar Business acquired by the Company and the ongoing business of the Company which he has obtained or developed or may receive, obtain, develop or have access to while a party to this Agreement or in the employ of the Company.
- (c) The restriction in clause 6.1(b) shall not apply to confidential information which may come into the public domain otherwise than through a breach by him of this clause 6 or which is used, divulged or communicated by him with proper authority.
- 6.2 The Company will be entitled to be fully informed of the results of all work done on its behalf by Wittwer and will have full and exclusive benefits of the results of such work including where applicable any intellectual property.
- 6.3 All intellectual property acquired by the Company pursuant to this Agreement and all intellectual property developed while Wittwer is an employee or consultant to the Company pursuant to this Agreement shall be and remain the property of the Company.
- 7.0 EXCLUSIVE SERVICES
- 7.1 Unless otherwise agreed, the Company shall be entitled to the exclusive services of Wittwer for a period of 5 years from the Execution Date.
- 7.2 Wittwer shall be engaged as a full time employee of or consultant to the Company for a period of one year from the Execution Date and shall be paid a remuneration of \$25,000 (from 1 July 1999) and be issued free Service Options to the value of \$25,000 in respect of such period.
- 7.3 The Company shall negotiate a remuneration package with Wittwer at the completion of each year, which shall be a minimum of \$50,000 per annum from the commencement of the second year.
- 7.4 In the event that the Company is not able to offer or pay Wittwer the full remuneration package referred to in clause 7.3, the Company shall not be obliged to employ Wittwer on a full time basis and if Wittwer is employed on a part time basis Wittwer shall be entitled to supplement his income through other work that does not compete with the business of the Company.
- 7.5 The Company will reimburse Wittwer all reasonable work related expenses incurred with the knowledge of the Company or in accordance with Company guidelines.
- 7.6 To ensure Wittwer's availability as specified in clause 7.1 Wittwer shall not, without the prior written consent of the board of the Company:
- (a) work (or render service of any sort) in any capacity to or for the benefit of any firm, person or company that conflicts or competes with or works in the same or similar industry as the Company;

- (b) accept a directorship (whether executive, working or otherwise) of any entity, other than a company established for the purpose of furthering the financial well being of the Wittwer's immediate family and provided such company does not conflict or compete with the Company or operate in the same or similar industry to the Company;
- (c) enter into partnership (whether as active partner or otherwise) that conflicts with or competes with the Company;
- (d) own, conduct or transact any business, private investment or private property transactions that conflict with or compete with the Company.

8.0 ASSIGNMENT

8.1 Subject to the Constitution of the Company, clause 2.3, and any other applicable regulations Wittwer shall be able to freely assign the Share Component, the Service Options and the Cash Component.

8.2 Wittwer grants to the Company a right of first offer over each of the Wittwer Interests as follows:

- (a) if Wittwer wishes to dispose of one or all of the Wittwer Interests he shall give the Company a notice advising that he wishes to dispose of the same and advising the price he wishes to sell such Wittwer Interest for and give the Company a period of no less than 60 days in which to elect as to whether or not it wishes to purchase the Wittwer Interest at the price specified;
- (b) if the Company elects to purchase the Wittwer Interest offered they shall be obliged to do so and settle within 14 days of the date of such election;
- (c) if the Company elects not to acquire the Wittwer Interest being offered or makes no election, then Wittwer shall be free to sell the Wittwer Interest at a price not less than that offered to the Company for a period of 120 days;
- (d) should Wittwer not be able to dispose of the Wittwer Interest within the period of 120 days specified in 8.2(c) or if Wittwer wishes to dispose of the Wittwer Interest at a price less than that specified in the notice in 8.2(a) then Wittwer shall again be obliged to comply with the provisions of clauses 8.2(a) to 8.2(c) before proceeding;

8.3 Clause 8.2 shall not prevent the assignment of one or all of the Wittwer Interests to an Associate of Wittwer provided that such Associate first enters into an agreement to be bound by the provisions of clause 8.2 in respect of any subsequent disposal or assignment.

8.4 The Company shall be free to sell or assign any intellectual property, subject only to the assignee entering into a deed acknowledging the obligation to pay either the BW Solar Royalty, the SES Royalty or the Conlog Royalty (as the case may be) to Wittwer.

9.0 TERMINATION

9.1 If prior to the making of the last payment due in respect of the Cash Component of the Consideration (and adjustments pursuant to clause 3) in the Company's sole opinion the BW Solar Business acquired by the Company proves not to be viable then the Company may terminate this Agreement on 7 days notice to Wittwer. Upon such termination the balance of the Cash Component together with any adjustments pursuant to clause 3 still outstanding, shall at Wittwer's election either remain payable to Wittwer or be satisfied in full by the transfer to

Wittwer of all intellectual property acquired by the Company at the time of acquiring the BW Solar Business. If Wittwer fails to make such election within 21 days of being asked to do so by the Company or the receivers liquidators or administrators (as the case may be), then the debt shall remain outstanding and the Company, receivers, liquidators or administrators may elect to sell all intellectual property to the highest bidder, subject to clause 8.4, in order to satisfy any outstanding liabilities. Any stock which the Company holds upon such termination may be purchased by Wittwer for a price equal to the cost to the Company

9.2 If either party shall at any time fail or neglect duly to perform or observe any of the covenants conditions or agreements herein contained or implied and such default shall continue for 14 days after notice thereof shall have been given to the other party or if either party shall become subject to or take advantage of any law relating to bankruptcy or insolvency THEN and in any such case it shall be lawful for the other party to terminate this Agreement by notice in writing to the defaulting party without prejudice to the right of action or remedy of the non defaulting party in respect of any antecedent breach of any of the covenants by the defaulting party.

9.3 For the avoidance of doubt, any purchaser or assignee of the intellectual property for the BW Solar Items or the SES Royalty Items, other than Wittwer and even in liquidation, shall be liable to Wittwer for the BW Solar Royalty, SES Royalty and Conlog Royalty as is applicable to the property sold and each assignee pursuant to clause 8.4 shall remain liable to pay each such royalty as is applicable following termination of this agreement.

10 NOTICES

10.1 Any notice or other communication including, but not limited to, any request, demand, consent or approval, to or by a party to this Agreement:

(a) must be in legible writing addressed to the person to whom it is to be given and:

(1) delivered;

(2) sent by pre-paid mail; or

(3) transmitted by facsimile transmission,

to that person's address as specified in clause 10.2 or such other addresses as are notified to the other party from time to time;

(b) must be signed by the party sending the notice and in the case of a body corporate by an officer or under the common seal;

(c) is regarded as being given by the sender and received by the addressee:

(1) if by delivery in person, when delivered to the addressee;

(2) if by post, 2 Business Days from and including the date of postage; or

(3) if by facsimile transmission, on receipt of a transmission report confirming successful transmission unless the addressee advises the sender within 24 hours from the time stated in the transmission report that the facsimile has not been legibly received,

but if the delivery or receipt is on a day which is not a Business Day or is after 4.00 pm (addressee's time) it is regarded as received at 9.00 am on the following Business Day; and

(d) can be relied upon by the addressee and the addressee is not liable to any other person for any consequences of that reliance if the addressee believes it to be genuine, correct and authorised by the sender.

10.2 Addresses for notices for the parties are:

In the case of Wittwer: Bruno Wittwer
9 Newborough Rd
Scarborough, Western Australia, 6019
Fax: (08) 9341 8711

In the case of the Company: Solar Energy Systems Pty Ltd
Unit 3
81 Guthrie Street
Osborne Park, Western Australia, 6017
Fax: (08) 9204 151911. GOVERNING LAW

11.1 This deed is governed by the laws of Western Australia.

11.2 Each party irrevocably and unconditionally:

- (1) submits and accepts the non-exclusive jurisdiction of the courts of Western Australia; and
- (2) waives any objection to the venue of any legal process on the basis that the process has been brought in an inconvenient forum.

12. SOLE AGREEMENT

12.1 This Agreement represents the entire agreement between Wittwer and the Company.

12.2 No variation of this Agreement shall be binding on either party unless contained in a document signed by or on behalf of both parties.

EXECUTED by the parties

Witness

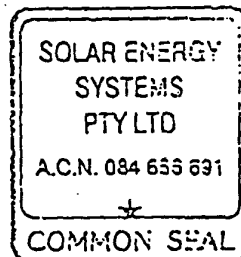
Name:

Robert Schlegel
ROBERT SCHLEGEL

Address:

163 Ewen Street
DOUBLEVIEW
WA 6018

The common seal of Solar Energy)
Systems Pty Ltd was affixed in)
accordance with its Constitution)



Bruno Wittwer
Bruno Wittwer

Director

Name:

Anthony Martin
Anthony Martin

Director / Secretary

Name: CHRIS MIDDLETON

Schedule 1 - BW Solar Royalty Items

The following items developed by Wittwer as part of the BW Solar Business are subject to the BW Solar Royalty:

1. "Sun Tracer" Tracking Systems

System, which is available in various sizes, that consists of hot dipped galvanised tracking frame that houses PV panels together with photosensitive trackers that track the sun while remaining balanced in all positions. The units return to the horizontal position after sunset. The unit's main advantage is that it increases the output of existing solar panels by 30-40% for power storage and 50-60% for water pumping applications.

Design Protection 3769/1998

Provisional Patent pp7209

Trademark Application No 779385

2. Sun Tracer Controls

STC 40C + Senser Unit. STC 124B + Sep Battery Charger

Design Protection 3771/1998

3. Power Maximiser

with or Without Level Monitor

Trademark Application No 779382

4. Level Monitor

as 12V or 240V Unit or Combined

5. Poly Piston Pumps

(Transfer or bore pump 2", 3" +4")

Design Protection 3587/1998

Provisional Patent pp7013

Trademark Application No 779386

6. Universal Pump Drive

(Hand, Solar or 240 V)

Design Protection 3768/1998

Provisional Patent pp7390

Trademark Application No 779383

7. The Tall Pump Drive

Solar, 240V or Combustion Engine)

Design Protection 3770/1998

Trademark Application No 779384

8. H2O Air Pump (also known as the Air Liquid Poly Pump)

Air operated plastic pump with no moving parts which is non corrosive. Suited for pumping salt water.

Provisional Patent pp7389

Trademark Application No 779381

9. Air Pump Controller

with Solenoid Valves

Design Protection 3772/1998

Solar powered electronic controller to operate the Air Liquid Poly Pump

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Group Art Unit:

Examiner:

Applicant: Wittwer

Application No: 09/831,615

PCT No: PCT/AU99/00992

Priority Date: 10 November 1998

Title: PISTON PUMP

Declaration of Officer of Solar Energy Systems Pty Ltd

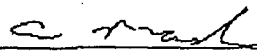
I, Anthony Robert Frederick Maslin, do hereby declare the following:

1. I am an officer of Solar Energy Systems Pty Ltd ("SES").
2. My title with SES is Managing Director.
3. I was an officer at the time SES purchased BW Solar on January 22, 1999.
4. The attached agreement identifies the entire agreement between SES and BW Solar.
5. SES purchased "BW Solar Business" pursuant to paragraph 2.1 of the attached agreement. "BW Solar Business" is defined in paragraph 1.1 to include, inter alia, "all patents and other intellectual property."
6. Under the paragraphs set forth above, the above-captioned patent application, which claims priority from two patent applications originally filed 10 November 1998 and 27 November 1998, respectively, being prior to the date of sale of BW Solar, was considered by both the parties to the agreement to be an asset that falls within the definition of "BW Solar Business." The aforesaid two priority patent applications, having application numbers PP7013 and PP7390, are listed at items 5 and 6 of Schedule 1 of the agreement. The preamble in Schedule 1 refers to the

items listed in Schedule 1 as being "developed by Wittwer as part of the BW Solar Business."

7. Having a knowledge of the technology, the priority patent applications set forth above in paragraph 6, the above-captioned international application PCT/AU99/00992, and the above-captioned patent application, I hereby declare that the above-captioned international application PCT/AU99/00992 and the above-captioned patent application do not include any new matter not contemplated by the two priority patent applications of paragraph 6.
8. Therefore, this asset was sold to SES when the above-identified agreement was executed.

It is the belief of the undersigned that the above-captioned patent application is an asset that is currently owned by SES, and it should have authority to proceed with the prosecution of the patent application before the United States Patent and Trademark Office. The undersigned, being hereby warned that willful false statements and the like so made are punishable by fine or imprisonment, or both, under 18 U.S.C. 1001, and that such willful false statements may jeopardize the validity of the application or any resulting registration, declares that the facts set forth in this application are true; all statements made of his/her own knowledge are true; and all statements made on information and belief are believed to be true.



Anthony Robert Frederick Maslin
Managing Director
Solar Energy Systems Pty Ltd



Date of Signature

Solar Energy Systems

LTD

Bruno Wittwer
21 Southbourne St
Scarborough WA 6019

Dear Bruno,

Re: Patent Application Documents for Signing.

In relation to the attached New Patent Application documents for the United States of America (PCT/AU99/0992) could you please read and sign where indicated and return to Solar Energy Systems Ltd in the envelope provided.

The documents are standard for an international patent application into the United States of America. The receipt for provisional application number PP7013 is dated 10 November 1998, which is prior to the date of the Agreement between Solar Energy Systems Ltd (ACN: 084 656 691) and Bruno Wittwer and is therefore cover in the acquisition of intellectual property under this agreement.

Your immediate attention is required in this matter to assist us in expediting the application process.

If you have any questions in relation to this matter please feel free to contact me.

Yours sincerely,


Greg Allen.

22/06/01

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PO Box 743 Scarborough WA 6922 Australia
Telephone +61 8 9204 1521 Facsimile +61 8 9204 1519
Freecall 1800 454 161 Email info@sesltd.com.au
Website www.sesltd.com.au ABN 27 084 656 691

Greg Allen

From: Bruno Wittwer
Sent: Monday, 9 July 2001 1:07 AM
To: Greg Allen
Cc: Rob Schlegel; Chris Middleton
Subject: Patent application

Dear Greg,

- 1) Anthony Maslin promised to remove close 6.1,2 and 3 and 8.1,2,3 and 4 from the Agreement, I would like this confirmed in writing and signed by Anthony and the board of SES.
- 2) I still want an official answer of Chris or the board of SES (not of a legal representative) to my offer of the In-line piston.
- 3) To consider your request to sign "assignment of U.S rights to corporation" and "power of attorney" regarding your "new patent application in the united states" I need a copy of the provisional patent application PP 7013, dated 10 Nov 1998 for my information as well as all related documents.

Regards, Bruno

16/07/01

Solar Energy Systems

LTD

11 July 2001

Bruno Wittwer
21 Southbourne Street
SCARBOROUGH WA
6922

Dear Bruno

Please find below our response to your email dated 9 July 2001.

In relation to point one (1) your request is being reviewed and as you alluded to this will be a decision for the board of Solar Energy Systems Limited.

Point two (2) will be accommodated in the immediate future, as Chris Middleton is currently in East Timor. Chris will forward a personal response confirming the legal response to your request in relation to the In-Line Piston.

In response to point three (3) of your email please find attached the relevant documentation requested. The signing of these documents is fast becoming a matter of urgency. Your immediate attention on this point would be appreciated.

If you have any questions please feel free to contact me.

Your Sincerely


Greg Allen
Chief Operating Officer

3/81 Guthrie Street Osborne Park WA 6017 Australia
PO Box 743 Scarborough WA 6922 Australia
Telephone +61 8 9204 1521 Facsimile +61 8 9204 1519
Freecall 1800 454 161 Email info@sasltd.com.au
Website www.sasltd.com.au ABN 27 084 656 691

Page 1 11/07/01

H:\Company\Personnel\Letters\Letter - Bruno Wittwer 110701.doc

AUSTRALIA
Patents Act 1990P/00/003
Section 29
Revised 2/98

Patent Request : Provisional Application

I/We, being the person(s) identified below as the Applicant, request the grant of a patent for an invention described in the accompanying provisional specification.

Full application details follow

[71]

Applicant(s)

Solar Energy Systems Pty Ltd

Address(es)

7 Newborough St. SubiacoState WAPostcode 6005

State

Postcode

[54]

Invention
TitlePoly Piston Pump

IP Australia

Documents received on:

[72]

Name(s) of
actual
inventor(s)Bruno Wittwer

10 NOV 1998

Batch No:

[74]

Address for
service in
AustraliaAs above

State

Postcode

Contact
Phone No.9341 8711

Email

bittap@ptlpcy.com.auAttorney
Codeamsh

Signature(s)

9.11.198

Date

AUSTRALIA
Patents Act 1990

COMPLETE SPECIFICATION
PROVISIONAL PATENT

DOUBLE ACTING "POLY PISTON PUMP"

The invention is described in the following statement:

The nature of the piston pump is that of a positive displacement, forced action and self-priming pump. Bruno Wittwer, the designer of the Poly Piston Pump, heard constant negative feedback on the dominant rotary pump used in solar applications, primarily in the agricultural sector. Solar driven pumps stop at night and start automatically in the morning at daybreak. If the water is lost in the suction pipe overnight, the pump will pump air instead of water, which wears out the pump rapidly in the morning causing pump failures. The criticism was that they were not self-priming, not reliable or of a high quality. They were not able to pump when not running at their specified RPM due to the centrifugal nature of the pump. For that reason, an overcast day will see the pump running at 50% of its specified RPM, hence not pumping any water. Since bore pumps were totally submersed in water, leakages in to the electrical motor of the pump were not uncommon.

Farmers were commonly heard to say, "why can't someone build a pump like the old windmill piston pump", because they are simple and easy to work on. After observing the nature of windmill pumps, he noted that a flywheel effect created by the weight of the 1/2 inch metal pump rod meant the singular lifting action of the piston pump was suited to windmills but wouldn't be useful for solar panels (double power required for the up-stroke, and no power required (and nothing achieved), on the down-stroke) i.e. Double the power would be required with solar panels.

To combat this, Bruno looked at the constant pumping action of the rotary pump, and the resulting steady power requirements on the solar panels. Bruno realised he needed a double acting pumping mechanism with a piston pump, particularly with a sealed top so pumping could continue above that height.

The resulting pump is a poly piston pump, which uses 50% power on the up-stroke and 50% power on the down-stroke, designed specifically for use with solar panels. The pump operates at full efficiency when the solar panels are exposed to full sunlight, and at a lesser rate on overcast days, where through its forced action the pump still delivers water. Any sunlight to the panel would result in the pump operating, and an amount of water being delivered to the surface, as maximum power is not a pre-requisite.

DOUBLE ACTING POLY PISTON PUMP

The invention relates to the design of a self-priming piston pump, which incorporates the concept of positive displacement of liquids, and utilises a forced action to effect the pumping of a liquid (in particular water) in a vertical or horizontal trajectory. This design uses a double action of the pump (i.e. the up stroke effect of the piston and the down stroke effect of the stuffing box and plastic rod (polystone 7000 rod)) which balances the use of the power generated.

The benefits of this type of pump are fourfold:

1. The transfer pump is self-priming, which is common to all piston pumps, meaning that once power is supplied to the pump-drive the piston will draw water from the source until it passes the piston, at which point it becomes a forced displacement action. Any amount of power supplied will drive the piston and produce water flow.
2. The double action of the bore and transfer pump, which incorporates the common U-shaped seal in the piston lifts the water on the up-stroke, and forces the remaining water in the pipe to rise during the down-stroke through displacement due to the effect of the pump rod pushing back down into the column and the sealing effect of the stuffing box.
3. The up-stroke of the bore pump requires minimal power, as it is assisted by the flotation effect of the hollow piping rod being lifted by the water once it has hit it's lowest point, thus minimising the power required in the upstroke of the rod into the water filled column.
4. The pump-body and outlet is built out of ABS thermoplastic, which is UV stabilised, wear resistant and non-corrosive (which is particularly important in areas of hard water or where the water has a high level of salinity).
5. If the U-cup seal on the piston fails the bore pump will still deliver 50% of the water on the down-stroke.
6. In case of water not being available at the source, the pump will not be damaged except for in extended dry circumstances, in which case only the piston seal needing to be replaced.

DESIGN

Bore and Transfer Pump

The poly-piston pump has a number of different components, which need to be described individually.

- 1) It is constructed from ABS thermo plastic, with its characteristics being that it is UV stabilised, wear resistant and non-corrosive. This presents various advantages. The piping and seals experience minimal wear during pumping even when it is running dry. Salinity or hardness of water has no effect.
- 2) The stuffing box incorporates the common U-cup seal, which remains under constant pressure during uphill pumping due to backpressure. The piston seal spreads to seal the inside of the outer column on the up-stroke, thus lifting the water, and then becomes streamline to the piston creating no resistance on the down-stroke.
- 3) A special glue (Tangit glue) is used to fasten all sections of pipe, and components. Trials were done with screw joints and common PVC glue, but it was found that the constant motion produced wear and tear and thus shortened it's effective life, whereas Tangit glue has been used on pipes submersed for over seven years and has shown no sign of weakening, or allowing any leakage or breakage of joints.
- 4) The pump rod is made from hollow PVC pressure pipe, with solid plug joiners between each length of pipe. This ensures that should one length of pipe in the pump rod leak, only that length will fill with water as opposed to the entire pump rod, enabling the pump to continue operating and making for easier repairs. The plug is internal, meaning the rod joins do not inhibit the flow of water between column and rod. This is an advantage over the use of external couplings.
- 5) The large diameter of the pipe means only small volumes of water are contained in the space between the piston rod and the outer column. For a 50mm column the piston rod will be 32mm in diameter. Lesser water means lesser weight in the column. As such, only half the power is required on the upstroke.
- 6) By using a large diameter of pipe as a piston rod, we avoid lifting more water than is displaced on the upstroke.

7) Centralisers keep the column in position within the bore casing. A centraliser consists of three pieces of PVC strip molded into a bow shape. By attaching the centralisers to the pump column and every second length of PVC pipe, they stabilise the column within the bore casing.

8) The column is made from 50 mm PVC pressure pipe gluing directly into the ABS pump body at the bottom and the ABS outlet on the top.

9) As a piston for the 3inch and 4inch pumps a standard return valve is used in combination with a U cup seal and two faucet sockets with four diagonal drill holes. The internal workings of the piston consist of a nipple which screws into the return valve at one end and a faucet socket at the other. This has the effect of holding the seal body in place between the return valve and the faucet socket.

An alternative design centres around the 2" piston design. This consists of a 4" base containing three inlet holes of 28mm diameter, which on an upward stroke are closed by three acrylic balls contained within individual chambers behind each inlet. The outer face of the piston has a U-cup seal positioned within a groove approximately one centimetre from the base of the piston, above which the outer face becomes a smaller diameter. Above the U-cup seal where the piston diameter becomes smaller, lie three outlet holes. On the top of the piston where the piston pipe is glued in place is situated three more holes allowing additional water to flow. The bottom of the piston pipe also has three outlet holes, directly above which is situated a solid PVC plug. The top of the PVC rod also contains a solid PVC plug with an M16 thread as a pickup point for the crank arm of the pump drive.

FUNCTIONALITY

1) The bottom section of the pump has a screen consisting of vertical slits cut into the wall of the PVC pipe, which allows the water to flow into the lower section of the pump.

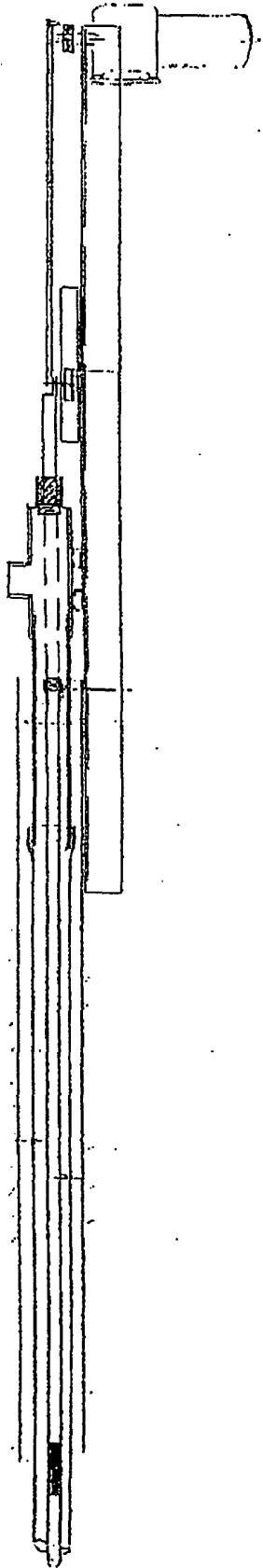
2) Above the screen is a non-return Philmac foot valve, which allows the water to rise into the next section of pipe, but not filter back into the bottom of the screen or back into the water source. The water moves through the non-return valve when a vacuum is created with the up-stroke of the piston lifting the water currently in the pipe, by the distance of the piston stroke. With each up-stroke of the piston, when the pump is full, an amount of water equivalent to the volume inside the pipe, (less the area consumed by the pumping rod), and to the length of the piston stroke, will be delivered from the outlet at the top (above ground level) of the pump. The water which has entered the space created by the up-stroke, will then be displaced upwards upon the piston and rod moving in a downward motion back to the start position. On the downward stroke, the Polistone 7000 rod entering the pump through the stuffing box displaces the other half of the water pumped. Simultaneously, the water is forced through a hole at the bottom of the piston, and out through three outlet holes situated above the U-cup seal. A 25mm (1 inch) acrylic ball that is in place in the small bottom cavity of the piston then seals that hole on the up-stroke.

3) An added advantage of this design is that the pump rod is hollow and fixed to the end of the piston, meaning air is trapped inside, using less energy whilst lifting the fluid on the upstroke, thus balancing the power used between up and down strokes.

POWER REQUIRED / USAGE

Power is supplied from a number of solar panels, typically two, four or six, that are assembled in a specifically designed frame that is linked to a tracking unit which will ensure the panels are always in position to receive the optimum level of sunlight. These are then used in conjunction with a DC motor. With optimum sunlight the pump will operate at 45RPM's.

The pump can also be manually operated, by wind power, water wheel, electric motors (AC) or combustion power. The pump is capable of being adapted to any power source.



Greg Allen

From: Bruno Wittwer
Sent: Monday, 16 July 2001 9:02 AM
To: Greg Allen
Cc: Chris Middleton; Rob Schlegel
Importance: Low

Dear Greg,

Point one and two of my last E-mail dated 09. 07. 2001 has to be resolved before I look into the documents you sent to me, for patent application in the US.

As I am no longer an employee of SES I have to charge a hourly rate of \$ 200.- + GST in increments of 15min. for any time spent to consider the content of the papers. A contract signed by SES agreeing to pay the hourly rate above for any work on behalf of SES is required as well as a deposit of \$ 5000.- payed into my account before the matter is delt with.

Regards B. Wittwer

16/07/01

Subject : FWD: FWD: Patent application
Date : Tue, 21 Aug 2001 14:11:00 +0800
Linked to: Bruno Wittwer
From : AMASLIN <GoldMine User>
To : BEDDINGT <GoldMine User>

—— Forwarded Message ——

FROM: GALLEN <GoldMine User>
TO: AMASLIN <GoldMine User>
DATE: Wed, 15 Aug 2001 08:03:08 +0800

RE: FWD: Patent application

—— Forwarded Message ——

FROM: "Bruno Wittwer" <bitt@perthpcug.org.au>
TO: "Greg Allen" <gallen@sesltd.com.au>
DATE: Tue, 14 Aug 2001 22:42:21 +0800

RE: Patent application

Dear Greg,
Responding to your latest request regarding the signing of "Assignment of US Right to corporation" and the "Declaration of Power of Attorney for Patent Application", I would like to make the following points:

1) I am not prepared to corresponded with Lawyers and Solicitors as I do not understand their jargon, and I am not prepared to be belittled by their command of English. English is still a foreign language to me and I do not fully understand the meaning of their letters, therefor reject to respond to their letters.

2) I made a contract on the 22 Jan 1999 with Anthony Maslin a former neighbour of mine who also promised "I look after you mate" and for that reason would like to deal with him directly. He is now Managing Director of SES.

I honoured the agreement between myself and SES to the last detail in all honesty. My business including all information, "intellectual property" and technical know-how is well and truly in SES's name and the transfer of my knowledge that was part of my business is complete.

Most certainly, your decision to run the business without further impute from me is proof enough that the business transfer is complete and that I have nothing to offer to SES. I have no control of what happened to patent applications hence I need to be fully informed before I can sign this forms.

I totally and utterly reject your allegations of being misleading or deceptive at any time - and everyone of the founding members of SES is well aware of my honesty, openness and indeed outspokenness.

As far as I am concerned, SES may take out any patent it likes in SES' own right and in SES's own name. The Agreement of the 22/01/99 does not contain any obligation for me to lodge an patent application. This Agreement was made in Australia and for Australia only with exception of the paragraphs regarding the South African company "Conlog".

3) I'm uncertain of the risks signing documents such as "Assignment of US Right to corporation" and the "Declaration of Power of Attorney for Patent Application" and of possible consequences.

I therefor do not regard it as unjustified to ask for a sum of money as there are no Royalty payments in place. You are aware of the reservations the first patent attorney made regarding the patentability of the Poly Piston Pump (from memory Anthony Maslin showed me one day a patent application from the eighties regarding a Piston Pump?) and I made the founding members of SES aware right from the beginning that it may not be patentable because it has been in the public arena for some time. Prior signing the Agreement of January '99, Robert Schlegel and myself went to talk to an patent attorney to get some information about the possibility of acquiring full patents for any of the my products.

4) If I was to sign the documents in question I would firstly need to be satisfied that it is not against the patent law or any other law to do so.

Secondly that I would not only need to be indemnified by SES for any consequences, but I would require a contract with SES to make certain that SES bears all risks and foreseeable and unforeseeable consequences about:blank

21/08/01

possible. And that is takes full responsibility for the application of such patent. Further that SES is responsible to cover any law suit may arise against me as a result of such patent.

Conditions to look into this documents:

- a) Point one and two of my e-mail dated 9.7. 01. still have to be resolved.
- b) A deposit of \$ 5000. has to be payed into my account to cover my time spent on this matter. (Up to date 3 1/2 h)
- c) I need my 1 666 666 options released for trading immediately.
- d) I want you to assign all rights of the Air Pump design to me in writing, as you declared having no interest in it's design or application.
- e) SES has to pay for a patent attorney of my free choice to check up on the patent applications.
- f) SES has to pay for a Solicitor of my free choice to draw up a contract.
- g) SES has to pay an amount of money to sell the products in America or if required worldwide.
- h) SES has to take all responsibility and consequences as drawn up in a contract.

Regards B. Wittwer

B/W SOLAR

PO Box 771,
Scarborough WA 6922
AUSTRALIA

Phone / Fax 08) 9341 8790
Mobile: 0417 931 316
e-mail: bitt@perthpcug.org.au

Solar Energy Systems
PO Box 743
Scarborough WA 6922

28.12.01

To the Board of SES,

As the inventor of the pumping technology in question I have not been involved in any of the patent applications. For that reason, I made an effort, to read the international patent application 15017/00 in my own time and tried to understand the "Piston Pump" described in the patent application.

As I read and as far as I understand, the "Piston Pump" described appears to be identical to the pump I designed manufactured and marketed in Australia and around the world for **several years**. (Anthony Maslin Managing Director of SES and my neighbour from 1990 to 1999 is well aware of it.)

I also displayed this piston pump together with the pump drive and Sun-Tracer at the "25th Salon international des innovations" in Geneva in 1977.

There are two features of the pump described in the patent application that do not correspond with the actual piston pump. Firstly the piston shown in Figure 2 (3 / 4) was a prototype only for the 3 and 4inch pump and proved to be unsuccessful.

Secondly, the joiner for the piston rod shown in Figure 3 was not reliable and was replaced in 1999 by a screw joint.

Surfing the net to find the patent application I read on the homepage of IP Australia the following advice: **Keep it quiet!** (See copy attached)

If you demonstrate, sell or discuss your inventions in public before you file a patent application, **you cannot get a patent?**

For that reason I am unsure if I can sign the US patent application for the piston pump as you requested and I need legal advise as requested in my e-mail to SES dated 14. August 2001.

Copy to: Wray & Associates, PO Box 6292 East Perth WA 6892

Copy to: David J. Simonelli, Clark Hill PLC, 500 Woodward Avenue, Suite 3500
Detroit, MI 48226-3435

Best regards,


B. Wittwer, Inventor

RECEIVED

JAN 18 2002

CLARK HILL

ALL OFFICES
POSTAL ADDRESS
PO Box 6292
East Perth
Western Australia 6892
Australia

E-mail: wray@wray.com.au
Website: http://www.wray.com.au

Wray & Associates
PATENT & TRADE MARKS ATTORNEYS ♦ Est 1920

Our ref: 102915:SGK:MES:DMS:kmb (BENTLEY OFFICE)
Your ref:

21 June 2001

Solar Energy Systems Pty Ltd
PO Box 743
SCARBOROUGH WA 6922

Attention: Mr Greg Allen

RECEIVED
22 JUN 2001

BY:

Dear Mr Allen

United States Patent Application PCT/AU99/00992
Solar Energy Systems Pty Ltd
"Piston Pump"

We have been advised by our associates in the United States that the above-referenced application was filed in accordance with our instructions. The filing receipt has yet to be issued by the US Patents and Trade Marks Office but we will forward a copy to you as soon as it is received.

We need to file a combined Declaration and Power of Attorney for this application, and in this regard, we enclose such a document for execution by Bruno Wittwer. Could you please forward this form to Mr Wittwer and ask him to sign the document where indicated.

On 22 May 2001 we forwarded to you an Assignment, also for execution by Mr Wittwer, which we have yet to receive.

We would be grateful if you could have these documents signed and forwarded to us so that we can, in turn, forward these onto our associates in the United States.

Should you have any questions in this regard, please do not hesitate to contact us.

Yours sincerely
WRAY & ASSOCIATES


Stephen Krouzecky

Enclosure: combined Declaration and Power of Attorney

Partners
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A App Phys, MAIP, FIPTA
John H King
B App Sc, FIPTA
Stephen G Krouzecky
B App Sc, FIPTA
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Australia
Telephone: (+61) 8 9791 4133
Facsimile: (+61) 8 9791 4133 assign docs

ASSIGNMENT OF U.S. RIGHTS TO CORPORATION

WHEREAS,

BRUNO WITTWER, residing at 9 Newborough Street, Scarborough, Perth, Western Australia, Australia 6019, and a citizen of Australia;

(herein called "THE UNDERSIGNED") has made an invention and have executed an application for Letters Patent of the United States concurrently herewith for this invention, which application is entitled:

"Piston Pump"

AND WHEREAS

SOLAR ENERGY SYSTEMS PROPRIETARY LIMITED, a corporation organized under the laws of Australia, and having an office and place of business at unit 3, 81 Guthrie Street, Osborne Park, Perth, Western Australia, Australia, 6017;

(herein called "THE ASSIGNEES") wish to acquire the entire right, title and interest in and to said invention and patent application and any Letters Patent to be obtained therefor;

NOW, THEREFORE, for and in consideration of the sum of One Dollar and other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, THE UNDERSIGNED hereby sells, assigns and transfers to THE ASSIGNEES, their successors and assigns, the entire right, title and interest for the United States in and to the invention disclosed in the aforesaid application, and in and to the said application, all divisions, continuations, or renewals thereof, all Letters Patent which may be granted therefrom, and all reissues or extensions of such patents, and THE UNDERSIGNED hereby authorize and request the Commissioner of Patents to issue any and all United States Letters Patent for the aforesaid invention to THE ASSIGNEES of the entire right, title and interest in and to the same, for the use of THE ASSIGNEES, their successors and assigns.

THE UNDERSIGNED hereby agrees that THE UNDERSIGNED, his executors and legal representatives will make, execute and deliver (without charge but at the expense of THE ASSIGNEES) any and all other instruments in writing including any and all further application papers, affidavits, assignments and other documents, and will communicate to THE ASSIGNEES, their successors and representatives all facts known to THE UNDERSIGNED relating to said invention and the history thereof and will testify in all legal proceedings and generally do all things which may be necessary or desirable to vest THE ASSIGNEES, its successors or assigns the entire rights, title and interest in and to the said invention, applications, Letters Patent, rights, titles, benefits, privileges and advantages hereby sold, assigned and conveyed, or intended so to be.

THE UNDERSIGNED represents and agrees with THE ASSIGNEES, its successors and assigns, that no assignment grant, mortgage, licence or other agreement affecting the rights and property herein conveyed has been or will be made to others by THE UNDERSIGNED, and that full right to convey the same as herein expressed is possessed by THE UNDERSIGNED.

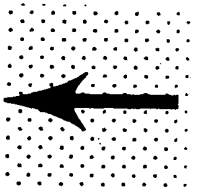
IN TESTIMONY WHEREOF, THE UNDERSIGNED has hereunto set his hand on the date indicated below.



BRUNO WITTWER



DATE



Declaration and Power of Attorney For Patent Application

English Language Declaration

As a below named inventor, I hereby declare that:

My residence, post office address and citizenship are as stated below next to my name,

I believe I am the original, first and sole inventor (if only one name is listed below) or an original, first and joint inventor (if plural names are listed below) of the subject matter which is claimed and for which a patent is sought on the invention entitled
PISTON PUMP

the specification of which

(check one)

☐ is attached hereto.

☒ was filed on 10 NOV 1999 as United States Application No. or PCT International

Application Number PCT/AU99/00992

and was amended on _____

(if applicable)

I hereby state that I have reviewed and understand the contents of the above identified specification, including the claims, as amended by any amendment referred to above.

I acknowledge the duty to disclose to the United States Patent and Trademark Office all information known to me to be material to patentability as defined in Title 37, Code of Federal Regulations, Section 1.56.

I hereby claim foreign priority benefits under Title 35, United States Code, Section 119(a)-(d) or Section 365(b) of any foreign application(s) for patent or inventor's certificate, or Section 365(a) of any PCT International application which designated at least one country other than the United States, listed below and have also identified below, by checking the box, any foreign application for patent or inventor's certificate or PCT International application having a filing date before that of the application on which priority is claimed.

Prior Foreign Application(s)

Priority Not Claimed

<u>PP 7013</u>	<u>Australia</u>	<u>10 Nov 1998</u>	<input type="checkbox"/>
(Number)	(Country)	(Day/Month/Year Filed)	
<u>PP 7390</u>	<u>Australia</u>	<u>27 Nov 1998</u>	<input type="checkbox"/>
(Number)	(Country)	(Day/Month/Year Filed)	
_____	_____	_____	<input type="checkbox"/>
(Number)	(Country)	(Day/Month/Year Filed)	

I hereby claim the benefit under 35 U.S.C. Section 119(c) of any United States provisional application(s) listed below:

_____	_____
(Application Serial No.)	(Filing Date)
_____	_____
(Application Serial No.)	(Filing Date)
_____	_____
(Application Serial No.)	(Filing Date)

I hereby claim the benefit under 35 U. S. C. Section 120 of any United States application(s), or Section 365(c) of any PCT International application designating the United States, listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in the prior United States or PCT International application in the manner provided by the first paragraph of 35 U.S.C. Section 112, I acknowledge the duty to disclose to the United States Patent and Trademark Office all information known to me to be material to patentability as defined in Title 37, C. F. R., Section 1.56 which became available between the filing date of the prior application and the national or PCT International filing date of this application:

_____	_____	_____
PCT/AU99/00992	10 NOV 1999	PENDING
(Application Serial No.)	(Filing Date)	(Status)
		(patented, pending, abandoned)
_____	_____	_____
(Application Serial No.)	(Filing Date)	(Status)
		(patented, pending, abandoned)
_____	_____	_____
(Application Serial No.)	(Filing Date)	(Status)
		(patented, pending, abandoned)

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

POWER OF ATTORNEY: As a named inventor, I hereby appoint the following attorney(s) and/or agent(s) to prosecute this application and transact all business in the Patent and Trademark Office connected therewith. *(list name and registration number)*

David J. Simonelli, Reg. No. 36,680

Robin W. Asher, Reg. No. 41,590

Send Correspondence to: David J. Simonelli
Clark Hill PLC
500 Woodward Avenue, Suite 3500
Detroit, MI 48226-3435

Direct Telephone Calls to: *(name and telephone number)*
David J. Simonelli, (313) 965-8300

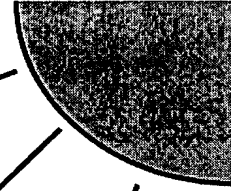
Full name of sole or first inventor Bruno Wittwer	Date
Sole or first inventor's signature	
Residence 9 Newborough Street, Scarborough, Perth, Western Australia 6019 (OLD)	
Citizenship Australian	
Post Office Address same as above P.O. BOX 771	
SCARBOROUGH WA 6922	
AUSTRALIA	

Full name of second inventor, if any	Date
Second inventor's signature	
Residence	
Citizenship	
Post Office Address	

B/W SOLAR

PO Box 771,
Scarborough WA 6922
AUSTRALIA

Phone / Fax 08) 9341 8790
Mobile: 0417 931 316
e-mail: bitt@perthpcug.org.au



David J. Simonelli
Clark Hill PLC
500 Woodward Avenue, Suite 3500
Detroit, MI 48226-3435

16.03.02

Dear Mr. Simonelli,

On the 28.12.10 I have sent you a copy of the letter I have sent to:
Wray & Associates, PO Box 6292 East Perth WA 6892 in response to they're request
to sign a patent application for Solar Energy Systems (SES) in the United States of
America.

I have not had a respond from Wray & Associates nor from SES. I have not
signed any assignment for execution nor an application for a patent in the United
States.

I am the Inventor of this technology Solar Energy Systems are selling, but I
plan to do marketing myself in the United States.

Please let me know in writing or by e-mail what the present status of the
application is.

Best regards,


B. Wittwer, Inventor

RECEIVED

MAR 26 2002

CLARK HILL

24/04/2003 16:49
24/04 2003 16:57 FAX

51-8-5 3413

MARIO BERNARDI

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Group Art Unit:

Examiner:

Applicant: Wittwer

Application No: 09/851,615

PCT No: PCT/AU99/00992

Priority Date: 10 November 1998

Title: PISTON PUMP

Declaration of Paul Francis Fletcher

I, Paul Francis Fletcher, do hereby declare the following:

1. I am a partner in the firm Solomon Brothers, Barristers, Solicitors & Attorneys, the solicitors acting for Solar Energy Systems Ltd ("SES").
2. I prepared the letter annexed to this declaration. It is the belief of the undersigned that the attached letter and its contents is a true application of Australian Law.

The undersigned, being hereby warned that willful false statements and the like so made are punishable by fine or imprisonment, or both, under 18 U.S.C. 1001, and that such willful false statements may jeopardize the validity of the application or any resulting registration, declares that the facts set forth in this application are true; all statements made of his/her own knowledge are true; and all statements made on information and belief are believed to be true.


Paul Francis Fletcher
Solicitor for Solar Energy Systems24 APRIL 2003
Date of Signature3179576v1
19724/087004

Solomon Brothers

Barristers, Solicitors, Attorneys

Level 40, Exchange Plaza
2 The Esplanade, Perth, Western Australia. 6000
PO Box Z5360, St George's Terrace, Perth 6831
DX 82, Perth Email: mailroom@solbros.com.au

24 April 2003

Telephone: + (618) 9282 5888 Facsimile: + (618) 9282 5855

PFF/

Enquiries: Paul Fletcher

Email: pfletcher@solbros.com.au

Direct Fax: 08 9282 5866

Clark Hill PLC
Suite 3500
500 Woodward Avenue
Detroit
MICHIGAN 48226-3435

Attention: David J Simonelli

By facsimile: 0011 1 313 965 8252

Dear Sirs

APPLICATION OF WITTWER, BRUNO
APPLICATION No: 09/831,615
PCT No: PCT/AU99/00992 - PISTON PUMP

The written agreement between Solar Energy Systems Ltd ("SES") and Bruno Wittwer ("Wittwer") dated 22 January 1999 ("the Agreement") provides for the sale by Wittwer to SES of the "BW Solar Business" which is defined as meaning:

"the solar energy and water pumping business developed by Wittwer and trading as BW Solar including, but not limited to, all patents and other intellectual property . . ."
(emphasis added).

There is no definition in the Agreement of the meaning to be ascribed to the word "patents" in the definition of BW Solar Business. The meaning intended by the parties to be given to "patents" must therefore be ascertained by examining its context, i.e. the balance of the agreement within which the word is used.

It is possible for an Australian Court to conclude that "all patents" means all existing patents owned by Wittwer relating to solar energy and water pumping technology, being the subject matter of the business Wittwer was selling. However, no granted patents owned by Wittwer were at the date of the agreement in existence. What did exist was a series of patent applications (as well as design and trademark applications) with respect to products and components comprising solar energy and water pumping technology. These items are listed in schedule 1 to the Agreement under the heading "BW Solar Royalty Items".

The preamble to the list in schedule 1 is the following statement:

"The following items developed by Wittwer as part of the BW Solar Business are subject to the BW Solar Royalty" (emphasis added).

The list includes references to various provisional patent applications, each of which is referred to as a "provisional patent". In fact, each constituted a provisional application for a patent.

When a court considers a document which is said to contain the terms of a contract that have been agreed upon by the parties, it will attempt to give effect to that agreement in the light of their

apparent intentions as expressed in that document (see *Life Insurance Co. of Australia Ltd v. Phillips* (1925) 36 C.L.R.). As Barwick C.J. pointed out in *Upper Hunter County District Council v. Australian Chilling & Freezing Co Ltd* (1968) 118 CLR 429, as long as the written contract "is capable of a meaning, it will ultimately bear that meaning which the courts" decide upon; the question then "becomes one of construction, of ascertaining the intention of the parties, and of applying it".

In our view, the reference by the parties in schedule 1 to provisional applications for patents as "patents" taken together with the fact that no relevant granted patents owned by Wittwer in fact then existed, is a strong indication that the parties, by the use of the word "patents" in the definition of "BW Solar Business", meant patent applications. Furthermore, this, in our opinion, is the conclusion that an Australian Court of competent jurisdiction properly advised on the facts would reach.

Alternatively, even if the word "patents" in the definition of "BW Solar Business" was not construed to include pending patent applications, such applications as listed in the schedule to the agreement would properly be held to constitute intellectual property other than (granted) patents, and to therefore fall within that part of the definition which refers to "other intellectual property".

That the parties intended the ownership of the listed provisional patent applications, and all patents that may issue based upon or arising out of those applications, to be transferred under the Agreement from Wittwer to SES as part of the BW Solar Business is clear from the definition in the agreement of "BW Solar Royalty Items" as meaning:

"The products developed as part of the BW Solar Business and listed in schedule 1 . . ."
(emphasis added).

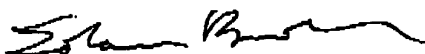
SES is obliged to pay to Wittwer a royalty of 25% of all licensing revenues in respect of the BW Solar Royalty Items. Clause 5.1 of the agreement specifies Wittwer's entitlement to be paid that royalty whenever SES enters into "licensing and/or royalty agreements" for the manufacture of certain products. In our view, the only ownership position consistent with that obligation is the assignment to SES by Wittwer of title to all of the inventions the subject of the provisional patent applications, the benefit of the patent applications themselves and any additional, substituted, divisional, continuances or other patent applications and patents based upon or arising out of the provisional applications or the inventions the subject of those applications. The piston pump the subject of PCT/AU/99/00992 and US Serial Number 09/831,615 is the invention the subject of Australian Provisional Patent Applications PP7013 and PP7390 listed in schedule 1 to the agreement, and the rights in those applications therefore were assigned from Wittwer to SES.

Finally, clause 2.8 of the agreement states:

"Wittwer hereby assigns to the Company with effect from the Effective Date all of Wittwer's right title and interest in the BW Solar Business free of any Encumbrance or third party interest".

In our opinion, the clear effect of this clause in the context of the balance of the agreement is to assign title to the inventions the subject of all patent applications listed in schedule 1 to SES. As a consequence, in our opinion, an Australian Court of competent jurisdiction would, by weight of authority in Australia, award to SES title to the invention the subject of PCT/AU/99/00992, and to any foreign filed patent applications including US Serial Number 09/831,615.

Yours faithfully



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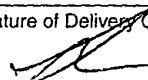


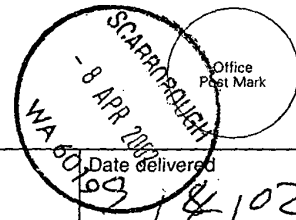
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Signature of Addressee or Agent


Signature of Delivery Officer




PM122/Nov'96

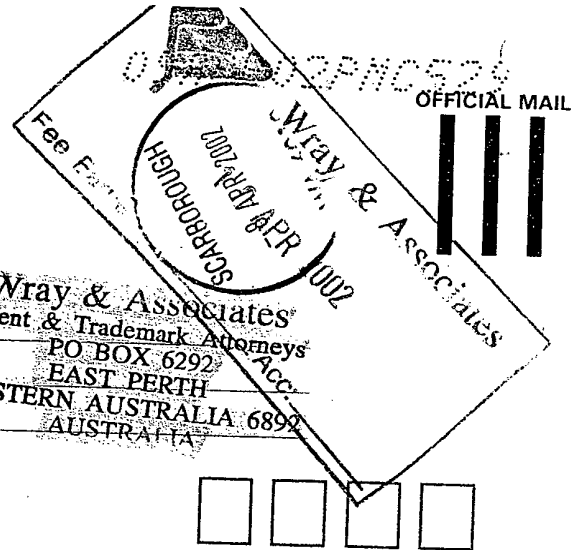
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BACK

AUSTRALIA
POST

Return to:

Wray & Associates
Patent & Trademark Attorneys
PO BOX 6292
EAST PERTH
WESTERN AUSTRALIA 6892
AUSTRALIA



ALL OFFICES
POSTAL ADDRESS
PO Box 6292
East Perth
Western Australia 6892
Australia

E-mail: wray@wray.com.au
Website: http://www.wray.com.au

Wray & Associates
PATENT & TRADE MARKS ATTORNEYS • Est 1920

REGISTERED MAIL

Our ref: 102915:LJBG:bn
Your ref:

5 April 2002

COPY

Partners

Errol J Harwood
A App Phys, MAIP, FIPTA
John H King
B App Sc, FIPTA
Stephen G Krouzecky
B App Sc, FIPTA
Gary B Cox
BSc (Hons), FIPTA
Peter M Caporn
BSc (Hons), FIPTA
Martin O'Sullivan
BSc (Hons), GDIP, FIPTA

Mr Bruno Wittwer
21 Southbourne Street
SCARBOROUGH WA 6019

Dear Mr Wittwer

US Patent Application based on International Patent Application
PCT/AU99/00992
Solar Energy Systems Pty Ltd
Piston Pump

Associate

Boris Golja
BSc, Dip Ed, MAIP, FIPTA

We act as patent attorneys for Solar Energy Systems Pty Ltd. We understand that several attempts have been made to contact you in relation to execution of documents in connection with the above US patent application.

Patent & Trade Marks Attorneys

Mark E Suddaby
BE, FIPTA
Stephen R Friend
BSc, FIPTA
Janet Stead
BSc (Hons), MSc, FIPTA
Peytee Khoo
BSc LLB
Todd Shand
BSc (Hons), LLB, MRACI

The above referenced US patent application claims priority, through the above identified international patent application, to Australian provisional patent application PP7013 (filed 10 November 1998) and PP7390 (filed 27 November 1998).

The following documents are enclosed with this letter for your execution as inventor:

1. Declaration and Power of Attorney for Patent Application, with attached specification (description, claims, drawings and abstract)
2. Assignment.

Professional Assistants

Peter Woodgate*
BEng (Elec) LLB, Dip Ed
Mike Brewis*
BSc Ph.D.
Scott Vilié
BEng (Mech)
Linda Kennaugh
BSc (Hons), Ph.D.
Chris Juhasz
BEng (Hons)
Robert Finn
BSc, BEng (Hons)
Debbie Slater
BSc (Hons), C Phys, M Inst P, CPA
Brendan Peachey
BSc (Hons), Ph.D. MRACI

Please review the patent application documents enclosed herewith and, if accurate, please sign and date the documents provided.

The Declaration and Power of Attorney and Assignment must be signed and dated at the spaces provided. The date should be entered with the month written as a word.

Once the enclosed documentation has been signed and dated, please return it to us.

Yours faithfully
WRAY & ASSOCIATES

Boris Golja

Enclosures

Declaration and Power of Attorney for patent application, with attached specification (description, claims, drawings and abstract)
Assignment.

PERTH OFFICE
239 Adelaide Terrace
Perth
Western Australia 6000
Australia
Telephone: (+61) 8 9325 6122
Facsimile: (+61) 8 9325 2883

BENTLEY OFFICE
Suite 6, Business Centre
2A Brodie Hall Drive, Bentley
Western Australia 6102
Australia
Telephone: (+61) 8 9470 5602
Facsimile: (+61) 8 9472 1352

BUNBURY OFFICE
Unit 13 Koombana Court
141 Victoria Street, Bunbury
Western Australia 6230
Australia
Telephone: (+61) 8 9791 4133
Facsimile: 1029 03 1009 225/2883 to Mr Wittwer

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- Additional insurance
- Delivery confirmation
- Person-to-person

From - Sender

Name

Wray & Associates

Address

PO Box 6292 East Perth

WA

Postcode 6892

Telephone Number

(08) 9325 6122

Fax Number

()

To - Addressee

Name

Mr Bruno Wittwer

Address

21 Southbourne Street

Scarborough

Postcode 6019

Telephone Number

()

Fax Number

()

Additional Insurance - additional fees apply

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IF YES:

Please provide a description of contents Quantity Item Value Total Value

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		\$	\$
		\$	\$
		\$	\$
		\$	\$

Total of insurance cover required \$

Supplementary Services - additional fees apply

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I require Delivery Confirmation

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Person-to-person delivery means that the person named in the address must be the recipient.

I require Person-to-person delivery

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Yes ☐ Charge Account Number

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Are you registered for the GST?

☒ Yes ☐ No

If YES, are you entitled to claim any input tax credits on the above services?

☒ Yes ☐ No

Declaration

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- 1 I am the customer and/or authorised agent of the customer;
- 2 I have read and agree to the Registered Post and Insurance Services Terms and Conditions;
- 3 All information contained on this document is to the best of my knowledge true and correct.
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Date

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Insurance

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Delivery Confirmation

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Person to person

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Total Payable

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Signature of Officer

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Date

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